UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/716,622	11/20/2003	Akira Watanabe	Y2238.0054	6336

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DICKSTEIN SHAPIRO LLP
1177 AVENUE OF THE AMERICAS (6TH AVENUE)
NEW YORK, NY 10036-2714

EXAMINER
HOTELLING, HAROLD A

ART UNIT	PAPER NUMBER
2164	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
Office Action Summary	10/716,622	WATANABE, AKIRA
	Examiner	Art Unit	
	Harold A. Hotelling	2164	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>20 November 2003</u>.

2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>1 - 17</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) <u>1 - 17</u> is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on <u>20 November 2003</u> is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☒ All   b) ☐ Some * c) ☐ None of:

       1. ☒ Certified copies of the priority documents have been received.

       2. ☐ Certified copies of the priority documents have been received in Application No. _____.

       3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-SB/08)
    Paper No(s)/Mail Date <u>Nov. 20, 2003; Dec. 11, 2003</u>.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

This communication is in response to the application filed on November 20,

2003. The application has been examined. Claims 1 – 17, of which 1, 9, and 17 are in

independent form, are pending in this Office Action.

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d),

claiming foreign priority to JPO application 2002-335904 (filed November 20, 2002),

which papers have been placed of record in the file.

Information Disclosure Statement

The information disclosure statements filed on November 20, 2003 and

December 11, 2003 are in compliance with the provisions of 37 CFR 1.97, 1.98 and

MPEP § 609. They have been placed in the application file and the information referred

to therein has been considered as to the merits.

Status of Claims

Claims 1 – 17 are rejected under 35 U.S.C. 102(e).

35 U.S.C. §102 rejection

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in . . . (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, . . .

Claims 1 – 17 are rejected under 35 U.S.C. 102(e) as anticipated by Li (U.S. Patent number 6,754,662) (effective filing date: August 1, 2000).

With respect to independent claim 1, discloses **[a] packet search device that performs packet filter search for an inputted packet** (column 2, lines 13 – 14: "The present invention relates to a method and apparatus for classifying data packets."), **comprising:**

a first search processing means for searching for search conditional statements corresponding to a plurality of information areas included in header information of said packet with a first search method (column 3, last four lines: "flows of traffic requiring different service are identified by information that can be extracted from packet headers such as source and destination IP addresses, . . ."); and

a second search processing means for searching the search results of said first search processing means with a second search method that is different from said first search method (column 4, lines 9 – 13: "Cache 108 stores a hash table with entries filled by class of service identifiers (i.e. classIDs) for (generally) the most recently detected flows. These entries are accessed by a hash key index that is generated by a hash function from packet header information . . .").

With respect to dependent claim 2, Li teaches **[t]he packet search device**

according to claim 1, wherein said <u>first search processing means</u> divides said

packet header information into a plurality of information areas and searches

across each search conditional statements structured as <u>binary search trees</u> for

each of said information areas separately (column 5, lines 54 – 57: "the choice of

data structures (i.e. a link list or a <u>binary tree</u> or other structure) may depend on the

particular design objective of the <u>packet classifier</u>.").

With respect to dependent claim 3, Li teaches **[t]he packet search device**

according to claim 2, wherein said second search processing means <u>searches</u>

aggregated <u>search results</u> of said first search processing means using <u>Hash</u>

method (column 4, lines 9 – 13: "Cache 108 stores a hash table with entries filled by

class of service identifiers (i.e. classIDs) for (generally) the most recently detected

flows. These entries are <u>accessed</u> by a hash key index that is generated by a <u>hash</u>

function from <u>packet header information</u> . . .").

With respect to dependent claim 4, Li teaches **[t]he packet search device**

according to claim 1, comprising a search <u>database</u> for managing each search

result of said first and second search processing means for each of said

information area (column 4, lines 9 – 13: "Cache 108 stores a <u>hash table</u> with entries

filled by class of service identifiers (i.e. classIDs) for (generally) the most recently

detected flows. These entries are accessed by a hash key index that is generated by a

hash function from packet header information . . .").

With respect to dependent claim 5, Li teaches **[t]he packet search device
according to claim 4, wherein said search <u>database</u> has a plurality of search <u>keys</u>**
(column 4, lines 9 – 13: "Cache 108 stores a <u>hash table</u> with entries filled by class of
service identifiers (i.e. classIDs) for (generally) the most recently detected flows. These
entries are accessed by a <u>hash key</u> index that is generated by a hash function from
packet header information . . .").

With respect to dependent claim 6, Li teaches **[t]he packet search device
according to claim 3, wherein said second search processing means manages
only <u>combinations of search results</u>** (column 4, lines 9 – 13: "Cache 108 stores a
hash table with entries filled by class of service identifiers (i.e. classIDs) for (generally)
the most recently detected flows. These entries are accessed by a <u>hash key index</u> that
is generated by a hash function from packet header information . . .").

With respect to dependent claim 7, Li teaches **[t]he packet search device
according to claim 1, wherein at least <u>QoS (Qualityof Service)</u> information and
<u>filter</u> information are searched for based on said <u>header information</u>** (column 3,
lines 55 – 60: "Memory 110 includes stored information about how different <u>classes of
network traffic</u> are identified and how they are to be treated. Such information can
include SLAs for DiffServ networks, and other <u>filters</u> and parameters for establishing
different levels of <u>Quality or Class of Service</u> for different flows of traffic.").

With respect to dependent claim 8, Li teaches **[t]he packet search device**

according to claim 1, wherein said packet search processing is performed at least

in a <u>router</u> and a <u>firewall</u> (column 3, lines 29 – 33: "FIG. 1 is a block diagram showing

a classification architecture 100 in accordance with one example of the invention. Such

an architecture can be provided in . . . an enterprise access/<u>firewall</u> router, a general

Internet access <u>router</u>, etc.").

With respect to claims 9 – 16, Li discoses **[a] packet processing search**

<u>method</u> that searches for a packet filter for an inputted <u>packet</u> before performing

packet processing (column 2, lines 13 – 14: "The present invention relates to a

<u>method</u> and apparatus for classifying data <u>packets</u>."), **comprising** the limitations of

claims 1 – 8.

Claims 9 – 16 are rejected on grounds corresponding to the arguments given

above for rejected claims 1 – 8, and are similarly rejected.

With respect to claim 17, Li discloses **[a] program for a <u>packet processing</u>**

<u>search</u> method that searches for a packet filter for an inputted packet before

performing packet processing, causing a <u>computer</u> to execute (column 10, lines 18

– 20: "the present invention can improve <u>packet classification</u> for long-lived flows such

as streamed multimedia data, Web cache <u>server</u> based traffic, . . ."),

first processing that <u>searches</u> for search conditional statements

corresponding to a plurality of <u>information areas</u> included in <u>header</u> information

of said <u>packet</u> **with a first search method** (column 3, last four lines: "flows of traffic

requiring different service are <u>identified</u> by information that can be extracted from <u>packet</u>

<u>headers</u> such as <u>source and destination IP addresses</u>, . . ."); **and**

    second processing that <u>searches</u> the <u>search results</u> of said first processing

with a second search method that is different from said first search method

(column 4, lines 9 – 13: "Cache 108 stores a hash table with entries filled by class of

service identifiers (i.e. classIDs) for (generally) the most recently detected flows. These

entries are <u>accessed</u> by a hash key index that is generated by a hash function from

<u>packet header information</u> . . .").

Contact Information

    The prior art made of record, listed on form PTO-892, and not relied upon, if any,

is considered pertinent to the applicant's disclosure.

    Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Harold A. Hotelling whose telephone number is (571)

270-1293. The examiner can normally be reached between 7:00 a.m. - 5:30 p.m.

Monday through Thursday.

    If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Charles Rones, can be reached on (571) 272-4085. The fax phone number

for the organization where this application or proceeding is assigned is 703-837-8902.

    Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Harold A. Hotelling
Examiner
Art Unit 2164

HAH
May 30, 2007

CHARLES RONES
SUPERVISORY PATENT EXAMINER